UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,187	10/12/2001	Joseph V. Simmons	3201.2.1	1417

28049 7590 09/23/2005

PATE PIERCE & BAIRD
215 SOUTH STATE STREET, SUITE 550
PARKSIDE TOWER
SALT LAKE CITY, UT 84111

EXAMINER	
THANGAVELU, KANDASAMY	

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/976,187	SIMMONS ET AL.	
	Examiner	Art Unit	
	Kandasamy Thangavelu	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *31-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 June 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *Jan 7, 2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to the Applicants' Response mailed on June 27, 2005. Claims 1-30 were canceled. Claims 31 –54 were added. Claims 31-54 of the application are pending. This office action is made final.

Drawings

2. The drawings submitted on June 27,2005 are objected to:

Fig. 20 has component object numbered 338. It should show connector object with number 338.

Appropriate correction is required.

Claim Objections

3. The following is a quotation of 37 C.F.R § 1.75 (d)(1):

> The claim or claims must conform to the invention as set forth in the remainder of the specification and terms and phrases in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

4. Claim 50 is objected to because of the following informalities:

In claim 50, Line 5, "performance data corresponding to each the one or more design elements" appears to be incorrect and it appears that it should be "performance data corresponding to each of the one or more design elements".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. §112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 34 and 44 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

6.1 Claim 34 states in part, "the input module and user interface module are configured to interface with the design module substantially independently from one another".

The use of the term, "to interface with the design module substantially independently from one another" appears to be incorrect since the user interface module is part of the input module as shown in Fig. 2 and Fig. 13; all inputs provided by the user through the user interface module will be validated by the input module before appropriate action is taken by the input module.

6.2 Claim 44 states in part, "a compensation module configured to identify monetary compensation due to a user from vendors". The description of the compensation module appears to be incorrect. Specification Page 4, Para 2, Lines 1-3, state "a business may be credited financially for providing software to a user who subsequently uses the software to make a purchasing decision". This implies that compensation will be paid by a user to vendors of the products.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 31-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 31, Line 8, recites the limitation "an analysis module configured to calculate the predicted performance of a system". There is insufficient antecedent basis for "the predicted performance" in the claim.

Claim 32, Lines 5-6, recite the limitation "a design module configured to operate on the inputs to create records reflecting the properties of the design elements". There is insufficient antecedent basis for "the properties of the design elements" in the claim.

Claim 32, Lines 9-10, recites the limitation "based on the behavior of at least one other design element of the design elements ". There is insufficient antecedent basis for "the behavior of at least one other design element" in the claim.

Claim 45, Lines 7-8, recites the limitation "to specify products available for sale and meeting the requirements to be the design elements". There is insufficient antecedent basis for "the requirements to be the design elements" in the claim.

Claim 49, Line 1, recites the limitation "the user interface further comprises a selection module". There is insufficient antecedent basis for "the user interface" in the claim.

Claim 49, Line 3, recites the limitation "connectable to one another in a schematic work space to establish the HVAC system design". There is insufficient antecedent basis for "the HVAC system design" in the claim.

Claims rejected but not specifically addressed are rejected based on their dependency on rejected claims.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 31-49 are rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter.

10.1 Independent claim 31 recites "An article as a computer-readable medium storing data structures of both executable and operational types, the data structures comprising:

a user interface module ...;

a data module ...; and

an analysis module ...".

The limitations recited in claim contain various modules comprising the data structures, which are stored in the article; the data structures and the article are not statutory subject matter. To be statutory, the claim should specify the computer-readable medium **storing computer data structures comprising computer executable instructions which when executed in a computer perform a design of the HVAC system**, the computer data structures comprising ....

10.2 Independent claim 32 recites "An article as a computer-readable medium storing data structures of both executable and operational types, the data structures comprising:

an input module ...;

a design module ...;

an analysis module ...; and

an output module ...".

The limitations recited in claim contain various modules comprising the data structures, which are stored in the article; the data structures and the article are not statutory subject matter. To be statutory, the claim should specify the computer-readable medium **storing computer data structures comprising computer executable instructions which when executed in a computer perform a design of the HVAC system**, the computer data structures comprising ....

The limitations recited in dependent claims 33-49 contain the article of claim 32 or other dependent claims; the article of claim 32 is not statutory subject matter.

11.1 Claim 31 would be statutory if it is rewritten as:

An article as a computer-readable medium storing computer data structures comprising computer executable instructions which when executed in a computer perform a design of the HVAC system, the computer data structures comprising ....

11.2 Claims 32-49 would be statutory if it is rewritten as:

An article as a computer-readable medium storing computer data structures comprising computer executable instructions which when executed in a computer perform a design of the HVAC system, the computer data structures comprising ....

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

13. Claims 31-35, 46 and 50-52 are rejected under 35 U.S.C. § 102(e) as being anticipated by **Hall et al.** (U.S. Patent 6,651,037).

13.1 **Hall et al.** teaches Method of optimizing design of an HVAC air-conditioning assembly for a climate control system. Specifically as per claim 31, **Hall et al.** teaches an article as a computer-readable medium storing data structures of both executable and operational types (Abstract; Fig.1; Fig. 6, Item 1010; CL1, L8-11; CL8, L42-52), the data structures comprising:

a user interface module configured to present a palette of design elements and support selection and manipulation of one or more design elements from the palette to form a schematic HVAC system (CL4, L1-2; CL4, L52-60; CL4, L61-67);

a data module containing performance data corresponding to each of the one or more design elements (CL3, L54-63; CL3, L64 to CL4, L1); and

an analysis module configured to calculate the predicted performance of a system made in accordance with the schematic HVAC system based on the performance data corresponding to each of the one or more design elements (CL2, L43-46; CL4, L18-27).

13.2 As per claim 32, **Hall et al.** teaches an article as a computer-readable medium storing data structures of both executable and operational types (Abstract; Fig.1; Fig. 6, Item 1010; CL1, L8-11; CL8, L42-52), the data structures comprising:

an input module configured to receive inputs characterizing design elements connectable to establish an HVAC system in schematic form (CL4, L1-2; CL4, L52-60);

a design module configured to operate on the inputs to create records reflecting the properties of the design elements and interactions therebetween, as set forth in the HVAC system (CL3, L54-63; CL3, L64 to CL4, L1);

an analysis module configured to operate on the records and automatically calculate behaviors of a selected design element of the design elements based on the behavior of at least one other design element of the design elements (CL2, L43-46; CL4, L18-27; CL7, L22-24); and

an output module configured to provide a user-interpretable output corresponding to the HVAC system (CL4, L50-52; CL5, L13-16).

Per claim 33: **Hall et al.** teaches that the data structures further comprise a user interface module configured to receive inputs from a user to control selection, relative positioning, and properties of the design elements to form the HVAC system (CL4, L1-2; CL4, L52-60; CL4, L61-67).

Per claim 34: **Hall et al.** teaches that the input module and user interface module are configured to interface with the design module substantially independently from one another (CL4, L1-2; CL4, L52-60; CL4, L61-67).

Per claim 35: **Hall et al.** teaches that the input module further comprises a user interface module configured to receive inputs from a user to control selection, relative positioning, and properties of design elements of the HVAC system (CL4, L1-2; CL4, L52-60; CL4, L61-67).

Per claim 46: **Hall et al.** teaches that the output module is further configured to do at least one of generating reports, drawing schematic illustrations, providing schedules of components,

and providing performance analyses reflecting the design elements (CL4, L50-52; CL5, L13-16; CL4, L18-27).

13.3 As per claim 50, **Hall et al.** teaches a method for designing an HVAC system (Abstract; Fig.1; Fig. 6, Item 1010; CL1, L8-11; CL8, L42-52), the method comprising:

selecting a computer running a first software application configured to present to a user a palette of design elements and support selection and manipulation of one or more design elements from the palette to form a schematic HVAC system; using the computer to manipulate one or more design elements from the palette to form a schematic HVAC system (CL4, L1-2; CL4, L52-60; CL4, L61-67);

the computer further storing performance data corresponding to each the one or more design elements (CL3, L54-63; CL3, L64 to CL4, L1); and

relying substantially exclusively on the computer to calculate a predicted performance of an actual HVAC system made in accordance with the schematic HVAC system (CL2, L43-46; CL4, L18-27).

Per claim 51: **Hall et al.** teaches using the computer to create a schedule of parts corresponding to the schematic HVAC system (CL3, L64 to CL4, L4; CL4, L18-25; CL5, L13-16; CL7, L22-24).

Per claim 52: **Hall et al.** teaches relying on the computer to provide a list of actual products with performance parameters corresponding to one or more of the design elements

contained in the schematic HVAC system (CL3, L64 to CL4, L4; CL4, L18-25; CL5, L13-16; CL7, L22-24).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

15. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 36-40, 47-49 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Harrington** (U.S. Patent 5,895,454).

16.1 As per claim 36, **Hall et al.** teaches the article of claim 32. **Hall et al.** does not expressly teach that the selected design element comprises a product available from a vendor, independent from the article, the product characterized by product properties corresponding thereto; and the design module further comprises a specification module, executable to assign the product properties as the properties of the selected design element. **Harrington** teaches that the selected design element comprises a product available from a vendor, independent from the article, the product characterized by product properties corresponding thereto (Abstract, L1-4); and the design module further comprises a specification module, executable to assign the product properties as the properties of the selected design element (Abstract, L4-7 and L10-13), because that allows a user with a selection of several vendor sites to select the vendor products that meet the user's product/service specifications (Abstract, L5-9); and allows the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Harrington** that included the selected design element comprising a product available from a vendor, independent from the article, the product characterized by product properties corresponding thereto; and the design module further comprising a specification module, executable to assign the product properties as the properties of the selected design element. The artisan would have been motivated because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications; and would allow the user to view, select, order and pay for products and services using the internet and remote vendor websites.

16.2 As per claims 37-39, **Hall et al.** and **Harrington** teach the article of claim 36. **Hall et al.** does not expressly teach that the data structures further comprise a product module configured to manage data reflecting the product properties; the product module further comprises an updating module configured to update the product proper; and the data structures further comprise a communication module configured to automatically establish communication between a user and the vendor of the product. **Harrington** teaches that the data structures further comprise a product module configured to manage data reflecting the product properties (Abstract, L4-7 and L10-13); the product module further comprises an updating module configured to update the product proper (Abstract, L10-13); and the data structures further comprise a communication module configured to automatically establish communication between a user and the vendor of the product (Abstract, L4-7 and L10-13), because that allows a user with a selection of several vendor sites to select the vendor products that meet the user's product/service specifications (Abstract, L5-9); and allows the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Harrington** that included the data structures further comprising a product module configured to manage data reflecting the product properties; the product module further comprising an updating module configured to update the product proper; and the data structures further comprising a communication module configured to automatically establish communication between a user and the vendor of the product. The artisan would have been motivated because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications; and would allow the user to

view, select, order and pay for products and services using the internet and remote vendor websites.

16.3 As per claim 40, **Hall et al.** and **Harrington** teach the article of claim 39. **Hall et al.** does not expressly teach that the communication module is further configured to do at least one of making inquiries of the vendor, placing orders with the vendor, and downloading updated values of the product properties from the vendor. **Harrington** teaches that the communication module is further configured to do at least one of making inquiries of the vendor, placing orders with the vendor, and downloading updated values of the product properties from the vendor (Abstract, L4-17); and the data structures further comprise a communication module configured to automatically establish communication between a user and the vendor of the product (Abstract, L4-7 and L10-13), because that allows a user with a selection of several vendor sites to select the vendor products that meet the user's product/service specifications (Abstract, L5-9); and allows the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Harrington** that included the communication module being further configured to do at least one of making inquiries of the vendor, placing orders with the vendor, and downloading updated values of the product properties from the vendor. The artisan would have been motivated because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications; and would allow the user to view, select, order and pay for products and services using the internet and remote vendor websites.

16.4 As per claim 47, **Hall et al.** teaches the article of claim 32. **Hall et al.** does not expressly teach that the data structures further comprise a product module comprising a specification module configured to provide a detailed specification for an arbitrary number of selected design elements. **Harrington** teaches that the data structures further comprise a product module comprising a specification module configured to provide a detailed specification for an arbitrary number of selected design elements (Abstract, L4-7 and L10-13), because that allows a user with a selection of several vendor sites to select the vendor products that meet the user's product/service specifications (Abstract, L5-9); and allows the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Harrington** that included the data structures further comprising a product module comprising a specification module configured to provide a detailed specification for an arbitrary number of selected design elements. The artisan would have been motivated because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications; and would allow the user to view, select, order and pay for products and services using the internet and remote vendor websites.

16.5 As per claim 48, **Hall et al.** and **Harrington** teach the article of claim 47. **Hall et al.** does not expressly teach that the product module further comprises product data corresponding to products available from vendors to serve as the design elements; and the specification module

further comprises a filter module configured to sort the products by features thereof and priorities of the features, each selectable by a user, in order to automatically specify detailed parameters characterizing a product selected by a user to serve as the selected design element. **Harrington** teaches that the product module further comprises product data corresponding to products available from vendors to serve as the design elements (Abstract, L1-4); and the specification module further comprises a filter module configured to sort the products by features thereof and priorities of the features, each selectable by a user, in order to automatically specify detailed parameters characterizing a product selected by a user to serve as the selected design element (Abstract, L4-7 and L10-13), because that allows a user with a selection of several vendor sites to select the vendor products that meet the user's product/service specifications (Abstract, L5-9); and allows the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Harrington** that included the product module further comprising product data corresponding to products available from vendors to serve as the design elements; and the specification module further comprising a filter module configured to sort the products by features thereof and priorities of the features, each selectable by a user, in order to automatically specify detailed parameters characterizing a product selected by a user to serve as the selected design element. The artisan would have been motivated because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications; and would allow the user to view, select, order and pay for products and services using the internet and remote vendor websites.

Per claim 49: **Hall et al.** teaches that the user interface further comprises a selection module providing a palette of icons representing design elements selectable arbitrarily by a user and connectable to one another in a schematic work space to establish the HVAC system design (CL4, L1-2; CL4, L52-60; CL4, L61-67).

16.6 As per claim 53, **Hall et al.** teaches the method of claim 52. **Hall et al.** does not expressly teach relying on the computer to automatically downloading information from selected vendors to generate the list of actual products. **Harrington** teaches relying on the computer to automatically downloading information from selected vendors to generate the list of actual products (Abstract, L4-7 and L10-13), because that allows a user with a selection of several vendor sites to select the vendor products that meet the user's product/service specifications (Abstract, L5-9); and allows the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14). It would have been method of **Hall et al.** with the method of **Harrington** that included relying on the computer to automatically downloading information from selected vendors to generate the list of actual products. The artisan would have been motivated because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications; and would allow the user to view, select, order and pay for products and services using the internet and remote vendor websites.

17. Claims 41 and 54 rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Subbarao** (U.S. Patent 6,134,511).

17.1 As per claim 41, **Hall et al.** teaches the article of claim 32. **Hall et al.** does not expressly teach that the data structures further comprise a load module configured to provide, to the input module HVAC loading parameters required to be accommodated by the HVAC system. **Subbarao** teaches that the data structures further comprise a load module configured to provide, to the input module HVAC loading parameters required to be accommodated by the HVAC system (CL1, L35-40; CL1, L46-48), because the HVAC loading parameters provide the amount of heat to be supplied or removed to provide the specified space conditioning (CL1, L38-40), accounting for the complex details of the building, the HVAC system, weather conditions and occupancy characteristics (CL1, L46-48). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Subbarao** that included the data structures further comprising a load module configured to provide, to the input module HVAC loading parameters required to be accommodated by the HVAC system. The artisan would have been motivated because the HVAC loading parameters would provide the amount of heat to be supplied or removed to provide the specified space conditioning, accounting for the complex details of the building, the HVAC system, weather conditions and occupancy characteristics.

17.2 As per claim 54, **Hall et al.** teaches the method of claim 50. **Hall et al.** does not expressly teach that selecting a computer further comprises selecting a computer running a

second software application configured to calculate HVAC loads for an edifice and further comprising inputting the HVAC loads into the first software application. **Subbarao** teaches that selecting a computer further comprises selecting a computer running a second software application configured to calculate HVAC loads for an edifice and further comprising inputting the HVAC loads into the first software application (CL1, L35-40; CL1, L46-48), because the HVAC loading parameters provide the amount of heat to be supplied or removed to provide the specified space conditioning (CL1, L38-40), accounting for the complex details of the building, the HVAC system, weather conditions and occupancy characteristics (CL1, L46-48). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the method of **Hall et al.** with the method of **Subbarao** that included selecting a computer further comprising selecting a computer running a second software application configured to calculate HVAC loads for an edifice and further comprising inputting the HVAC loads into the first software application. The artisan would have been motivated because the HVAC loading parameters would provide the amount of heat to be supplied or removed to provide the specified space conditioning, accounting for the complex details of the building, the HVAC system, weather conditions and occupancy characteristics.

18. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Subbarao** (U.S. Patent 6,134,511), and further in view of **Pray et al.** (U.S. Patent 4,885,694).

18.1 As per claim 42, **Hall et al.** and **Subbarao** teach the article of claim 41. **Hall et al.** teaches that the data structures further comprise a CAD module configured to provide, to the input module, data reflecting a design of a vehicle interior (Abstract, L1-2; CL4, L5-12; CL7, L4-6; CL7, L32-35). **Hall et al.** does not expressly teach that the data structures further comprise a CAD module configured to provide, to the input module, data reflecting a design of an edifice. **Pray et al.** teaches that the data structures further comprise a CAD module configured to provide, to the input module, data reflecting a design of an edifice (CL1, L6-9; CL1, L30-45; CL3, L60-61; CL4, L50-51), because that allows the computer system to automate the design of the building control system such as the HVAC system (CL1, L30-32; CL1, L6-9). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Pray et al.** that included the data structures further comprising a CAD module configured to provide, to the input module, data reflecting a design of an edifice. The artisan would have been motivated because that would allow the computer system to automate the design of the building control system such as the HVAC system.

19. Claims 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Subbarao** (U.S. Patent 6,134,511), and further in view of **Pray et al.** (U.S. Patent 4,885,694) and **Harrington** (U.S. Patent 5,895,454).

19.1 As per claim 43, **Hall et al., Subbarao** and **Pray et al.** teach the article of claim 42. **Hall et al.** does not expressly teach that the data structures further comprise a product module configured to specify products available for sale and meeting requirements to be the design

elements. **Harrington** teaches that the data structures further comprise a product module configured to specify products available for sale and meeting requirements to be the design elements (Abstract, L4-7 and L10-13), because that allows a user with a selection of several vendor sites to select the vendor products that meet the user's product/service specifications (Abstract, L5-9); and allows the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Harrington** that included the data structures further comprising a product module configured to specify products available for sale and meeting requirements to be the design elements. The artisan would have been motivated because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications; and would allow the user to view, select, order and pay for products and services using the internet and remote vendor websites.

19.2 As per claim 44, **Hall et al., Subbarao, Pray et al.** and **Harrington** teach the article of claim 43. **Hall et al.** does not expressly teach that the data structures further comprise a compensation module configured to identify monetary compensation due to a user from vendors of the products specified as design elements in the HVAC system. **Harrington** teaches that the data structures further comprise a compensation module configured to identify monetary compensation due to a user from vendors of the products specified as design elements in the HVAC system (CL1, L6-14), because that allows a user with a selection of several vendor sites to select the vendor products that meet the user's product/service specifications (Abstract, L5-9);

and allows the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Harrington** that included the data structures further comprising a compensation module configured to identify monetary compensation due to a user from vendors of the products specified as design elements in the HVAC system. The artisan would have been motivated because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications; and would allow the user to view, select, order and pay for products and services using the internet and remote vendor websites.

19.3 As per claim 45, **Hall et al.** teaches the article of claim 32. **Hall et al.** teaches that the input module is further configured to interact with a CAD module provided by an independent third party to provide, to the input module, data reflecting a design of a vehicle interior (Abstract, L1-2; CL4, L5-12; CL7, L4-6; CL7, L32-35). **Hall et al.** does not expressly teach that the input module is further configured to interact with a CAD module provided by an independent third party to provide, to the input module, data reflecting a design of an edifice. **Pray et al.** teaches that the input module is further configured to interact with a CAD module provided by an independent third party to provide, to the input module, data reflecting a design of an edifice (CL1, L6-9; CL1, L30-45; CL3, L60-61; CL4, L50-51), because that allows the computer system to automate the design of the building control system such as the HVAC system (CL1, L30-32; CL1, L6-9). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Pray et al.** that

included the input module being further configured to interact with a CAD module provided by an independent third party to provide, to the input module, data reflecting a design of an edifice. The artisan would have been motivated because that would allow the computer system to automate the design of the building control system such as the HVAC system.

Hall et al. does not expressly teach a load module configured to receive outputs from the CAD module and provide, to the input module, HVAC loading parameters corresponding to the edifice. **Subbarao** teaches a load module configured to receive outputs from the CAD module and provide, to the input module, HVAC loading parameters corresponding to the edifice (CL1, L35-40; CL1, L46-48), because the HVAC loading parameters provide the amount of heat to be supplied or removed to provide the specified space conditioning (CL1, L38-40), accounting for the complex details of the building, the HVAC system, weather conditions and occupancy characteristics (CL1, L46-48). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Subbarao** that included a load module configured to receive outputs from the CAD module and provide, to the input module, HVAC loading parameters corresponding to the edifice. The artisan would have been motivated because the HVAC loading parameters would provide the amount of heat to be supplied or removed to provide the specified space conditioning, accounting for the complex details of the building, the HVAC system, weather conditions and occupancy characteristics.

Hall et al. does not expressly teach a vendor module, provided by an independent vendor and configured to specify products available for sale and meeting the requirements to be the design elements. **Harrington** teaches a vendor module, provided by an independent vendor and configured to specify products available for sale and meeting the requirements to be the design

elements (Abstract, L4-7 and L10-13), because that allows a user with a selection of several vendor sites to select the vendor products that meet the user's product/service specifications (Abstract, L5-9); and allows the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the article of **Hall et al.** with the article of **Harrington** that included a vendor module, provided by an independent vendor and configured to specify products available for sale and meeting the requirements to be the design elements. The artisan would have been motivated because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications; and would allow the user to view, select, order and pay for products and services using the internet and remote vendor websites.

Response to Arguments

20. Applicants' arguments filed on June 27, 2005 have been fully considered. The arguments with respect to 103 (a) rejections are moot, in view of new rejections made against the new claims.

20.1 As per the applicants' argument that "neither Aziz, Pray, Gibino, Littleford, House, Miousheve, nor any combination thereof teaches or suggests an analysis module configured to calculate the predicted performance of a system made in accordance with the schematic HVAC

system based on the performance data corresponding to each of the one or more design elements, as required by the Applicant's claim 31", the examiner has used a new reference **Hall et al.**

Hall et al. teaches an analysis module configured to calculate the predicted performance of a system made in accordance with the schematic HVAC system based on the performance data corresponding to each of the one or more design elements (CL2, L43-46; CL4, L18-27).

20.2 As per the applicants' argument that "neither Aziz, Pray, Gibino, Littleford, House, Miousheve, nor any combination thereof teaches or suggests an analysis module configured to automatically calculate behaviors of a selected design element of the design elements based on the behavior of at least one other design element of the design elements, as required by the Applicant's claims 32-49", the examiner has used a new reference **Hall et al.**

Hall et al. teaches an analysis module configured to operate on the records and automatically calculate behaviors of a selected design element of the design elements based on the behavior of at least one other design element of the design elements (CL2, L43-46; CL4, L18-27; CL7, L22-24).

Conclusion

ACTION IS FINAL

21. Applicant's amendments necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Thangavelu
Art Unit 2123
August 29, 2005

Paul L. Rodriguez 8/31/05
Primary Examiner
Art Unit 2125